ENGINEERING NEWS-RECORD

eater-of-operations for "Big Inch" pipeline shifts from Midwest plains to Eastern mountains

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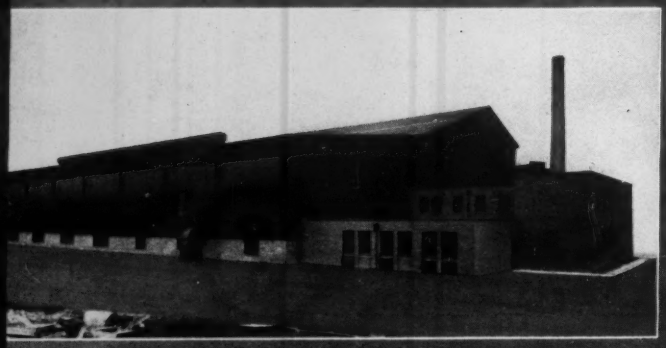

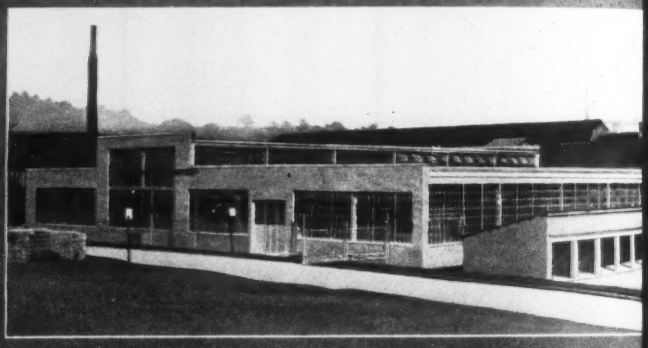

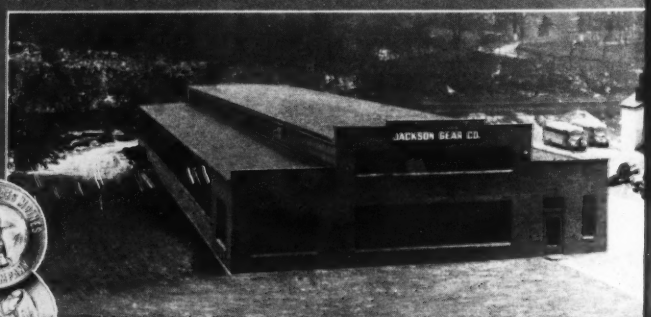

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The Week In Engineering and Construction

ENGINEERING NEWS-RECORD • FEBRUARY 18, 1943 • VOLUME 130 • NUMBER 7

Reclamation Bureau studies projects' economic aspects

Studies of Central Valley project, now under way, seek to ascertain economic effects of huge power-irrigation jobs on economy of lands included in territory

The Bureau of Reclamation has in-ted a series of studies of the economy the Sacramento-San Joaquin Central lley in California (*ENR*, Jan. 21, p.). These studies, aimed at the most eful distribution of the water to be pplied by the Central Valley project. similar in conception to the studies ich have been underway for several rs in the Columbia Basin area in con-tion with the Grand Coulee project. Both at Grand Coulee and at Central lley the bureau has in hand projects large that their operations will pro-ndly modify the economy of large eas of the country. Thus operating de-isions that can be made very simply on aller projects become involved with a st of conflicting local interests and ws. When plans were being drawn for igating a huge tract of desert and -farm land in the Columbia Basin, bureau sought to solve this problem drawing into its planning on a co-erative basis all the planning and blic works agencies, state and local, th official and unofficial, as well as erested federal agencies. Several dozen estions were laid out for study, and oups drawn from the various interested ncies were set to the solution of each.

Columbia Basin studies continue

The war has halted development of Columbia Basin irrigation work, but studies are continuing. A final report uld be ready within a few months. eanwhile, the bureau is seeking legis-ion (*ENR*, Feb. 11, '43, p. 173) to pre-nt land speculation and aid in splitting the large dry-farm holdings into farms sizes suitable for intensive irrigated rming.

The problem at Central Valley is more mplex. There, the power and water pply benefits of the project are being nished to an already highly developed a instead of to the relatively unex-ited Columbia Basin. Thus, much of the land to receive water is concentrated in big semi-industrialized farms. If the decision is made to give them water without cutting the farms into smaller units, it will be necessary to amend the reclamation law, which now limits holdings to 160 acres.

Again, some of the irrigation districts are able to pay more for water than others, and a decision must be reached on a differential price. The topography is such that water run on to the high-lying districts will also benefit the lower districts by raising the water table; some way must be found of inducing the low districts to pay for this water. Proper allocation of some of the water to industrial use must be made. Many similar problems present themselves.

The Central Valley project study is under the general direction of Harlan H. Barrows. Major participating agencies include the U. S. Bureau of Reclamation, U. S. Department of Agriculture, University of California, Stanford University, California Water Project Authority, and the state Department of Agriculture.

Problems for study

One group of questions for study covers the relation of the project to war needs: growth of guayule rubber, food supply, industrial water and power needs. These studies are expected to determine whether a showing can be made that work on the shut-down irrigation phases of the project should be resumed during the war. Another group of questions concerns the post-war readjustment problems of the area and the sequence of construction operations best calculated to help with these problems.

(*Continued on following page*)

Press Assn. photo

Oil pipe line moves through Pennsylvania hills

In the rolloing hills of eastern Pennsylvania, a section of the "Big Inch" pipe line being put down from Texas to New York and Philadelphia to ease the wartime oil shortage of the eastern seaboard is shown under construction above.

In the foreground, workmen are clearing a trench through a hill of rock and making preparations to carry the pipe under a small creek.

Recent announcements by the Petroleum Administration of War (ENR, Feb. 11, p. 172) have shown that deliveries of pipe for this vitally needed war line are running ahead of anticipated schedules.

U. S. Reclamation Bureau studies big projects

(*Continued from first page*)

A final major group of questions concerns the allocation of cost of the project among power, irrigation, navigation, flood control, salinity repulsion, recreation, and national defense and means for obtaining payment from beneficiaries of these various factors. Also included are studies of the most appropriate terms, conditions, and prices in the sale of water and power.

. . .

Limit war contractors' margin of profit

A joint statement issued by Army and Navy officials recently put war contractors on notice that they could no longer expect peacetime profit margins on government business, and that such profits may be limited to as little as one-third of the margin of profits normal on peacetime sales.

The statement made by Robert P. Patterson, Under Secretary of War and James V. Forrestal, Under-Secretary of the Navy, said that the experience of the armed services has indicated the advisability of a statement of principles guiding the two departments in negotiating contract prices and in renegotiating such prices.

"The rate of profit on peacetime business is not of itself the basis for profits to be made on war contracts," the statement said. "Because of the unprecedented volume of business due to war orders, a substantial reduction in profit margins below peacetime levels will usually leave contractors with an adequate dollar amount of profits on war work. Any single profit yardstick is invalid because of wide variations among contractors in investment, efficiency, past earnings, government assistance, etc. However, in general, the margin of profit that a company makes on its expanded war sales may be limited to one-half or one-third of the margin of profit on peacetime sales.

"The Procurement Branches of the War and Navy Departments distinguish between a contractor's right to a reasonable profit and his need for working capital. A company should not be allowed to earn excessive profits on war contracts merely because it lacks adequate working capital in relation to a greatly expanded volume of busines..

WPB may relax concrete reinforcing restriction

The War Production Board, it was believed early this week, may soon relax some of its restrictions on the use of reinforced concrete construction.

It is understood that an order will be issued within a few days permitting the use of reinforced concrete construction on many types of structure for which use of wood or plain concrete is now required. This may even include some types of temporary wartime structures where fireproof design is desirable, as well as those for which a post-war use is anticipated.

Mandatory use of the emergency specifications for design of reinforced concrete buildings will presumably be continued.

Strong arguments have been presented to WPB in recent weeks for permitting more use of reinforced concrete. The steel reinforcement bar situation is relaxing somewhat as a result of the falling level of construction. Most reinforcing steel is now re-rolled from scrap rail, and steel company spokesmen believe that the steel situation is better.

Oregon counties oppose increasing load limits

The Association of Oregon Counties in anticipation of legislative moves to make permanent the present emergency limits on trucks and truck weights, recently passed a resolution opposing any such proposal.

At the legislative session two years ago the highway commission supported a measure that would have raised the limits from 54,000 lb. weight and 50-ft. length now provided by law, to the 68,000 lb., 60-ft. limit in effect in California and Washington. The proposal was defeated by the legislature, but as a war emergency measure to facilitate handling materials by interstate truck lines the commission within the last year used its emergency powers to put the larger limits into effect.

NEED for additional space to accommodate students has necessitated the removal of the Engineer Supply School of the Columbus, Ohio, Quartermaster Depot to the Granite City, Ill., Engineer Depot, according to Col. William H. Calvert, of the Columbus depot.

Press Assn. photo

Sunken French ship refloated at Casablanca

The French vessel S. S. Ile D'Ovessant, shown at center, with white superstructure, in the above photograph, which foundered at the dock side in Casablanca harbor when United Nations troops pounded shipping there as a prelude to the occupation of that city, has been raised as part of the harbor-clearing task.

This aerial photograph, showing the merchantship surrounded by warships, also gives a good view of the city where the recent historical conferences between leaders of the United Nations took place. No details as to the process in use in raising the vessel were made public.

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Highway boards, planners announce new programs for postwar construction

Ohio to start preliminary work on $100,000,000 program, other states and cities consider financing problems and new projects

Looking to highway construction, with great possibilities of use of unskilled and semi-skilled labor, to provide an outlet for post-war labor markets, state, city and other governmental highway administrations throughout the United States, are keeping their engineering staffs at work on plans for major improvements to existing systems.

Last week brought announcement of major plants from Ohio, North Carolina, Washington and other states, as well as cities and other governmental units. In Ohio, Hal G. Sours, director of the State Department of Highways, announced that it had received official approval of the Public Roads Administration for a proposed post-war highway construction program that contemplates the expenditure of up to $100,000,000 over a period of five years.

The action of the P.R.A. carries with it the approval of an expenditure of $30,000 by the federal government, to be matched by an equal amount by the state, to cover expenses of preliminary studies and surveys to determine location, line, grade and design. Method of financing actual construction will be determined at a later date.

Projects contemplated include construction of 162 miles of highways.

North Carolina legislators considered a bill that would authorize the issuance of $15,000,000 in bonds, the proceeds of sale to be used for highway construction projects immediately after the war. The bill follows a suggestion made by Governor J. M. Broughton recently (*ENR* Jan. 14, p. 18), and is designed to enable the state to quickly restore its highways to pre-war condition after the present conflict, and provide post-war employment.

The bonds would be used to finance the construction of causeways, bridges, repairs to existing highways and new road construction.

The Washington State Highway Department, cited the successful operation of a concrete pontoon bridge across Lake Washington at Seattle, said it was considering post-war construction of a similar bridge across the Hood canal, a branch of Puget Sound, at Lafall. The department asked the state legislature to allocate $20,000 for experimental work to determine if the concrete pontoon bridge would be successful over salt water, where tides would have to be taken under consideration.

In Pennsylvania, Senator C. T. Woodring introduced a measure into the legislature that would authorize extending the Pennsylvania Turnpike from Harrisburg to a point on the Delaware River.

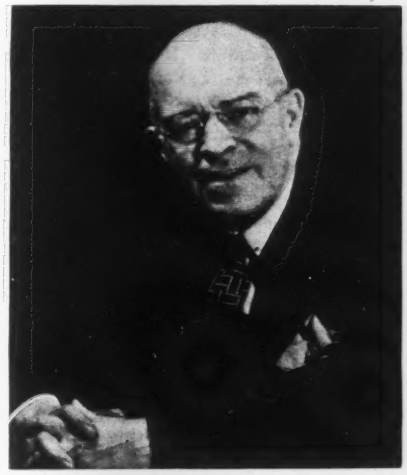
Senator Woodring said he also plans to introduce another bill to add about 95 miles to the express highway on a route paralleling the present highway No. 22 which crosses a section of the state. Previous legislatures had authorized extensions eastward to Philadelphia and westward to the Ohio state line, but construction has been delayed by war.

Opened in 1940 the present 160-mile turnpike was financed by a public works grant of $29,250,000 and a reconstruction finance loan of $40,800,000. Plans for providing funds for the eastward extension are now being studied.

The Cincinnati, Ohio City Planning Commission submitted to city councilmen recently an $8,000,000 plan for widening and straightening the city streets to provide boulevard accommodations for traffic through the city. As proposed by the Commission's engineering staff, the plan would bring into being an elaborate clover-leaf treatment of arteries at intersections, a broad thoroughfare along East Clifton Avenue to Main Avenue, and would also make improvements along the Ohio River front.

Denver, Colo., considers a proposal to construct two underpasses to carry Speer Blvd. and Forest Drive under Broadway at an estimated cost of $308,596. Under the plan, Speer Blvd. would cross under Broadway on the north side of Cherry Creek and Forest Drive under Broadway on the south side of the Creek. The underpasses would be 40 ft. wide, providing for four lanes of traffic.

The project is one of a series of public improvement being studied by the City Planning Commission for post-war construction.



Kenneth MacK. Cameron heads Canadian engineers

Kenneth MacKenzie Cameron, chief engineer of the Department of Public Works of the Dominion of Canada, was elected president of the Engineering Institute of Canada at its annual meeting held in Toronto, Feb. 11-12. A native of Strathroy, Ont., Mr. Cameron graduated from the Royal Military College in 1901, studied civil engineering at McGill University, and after a brief period with the Canadian Pacific Ry. and the Canadian Niagara Power Co. and a term of lecturing at McGill, came to New York for work on the Pennsylvania R. R. tunnels under the Hudson River. Subsequently he was with the Union River Power Co. in Maine and the Ambursen Hydraulic Construction Co. on dam construction in Wyoming.

Returning to Canada in 1908, Mr. Cameron was with the consulting engineering firm of Smith, Kerry & Chace, Toronto, for a brief time before joining the Department of Public Works. In that department he became senior assistant in the dredging branch in 1912, assistant chief engineer in 1918, and in 1923 was appointed chief engineer.

Connecticut considers retaining old Thames bridge

Connecticut legislators have appealed for retention of the old highway bridge over the Thames River between Groton and New London as a wartime emergency measure and a convenience to commuting war workers.

A new highway toll bridge is practically ready for traffic (*ENR*, Jan. 21, p. 100) and under a 1939 legislative act creating the New London-Groton Bridge Commission, the new toll bridge construction was authorized and a provision was included for razing the old structure within 180 days of the opening of the new toll bridge.

Representatives in the legislature urged keeping the old structure intact as an alternate route in the event of air attack on the new bridge and to aid war workers, many of whom must cross the river to reach their jobs several times daily. Highway commissioner William J. Cox testifying before the legislature's Roads, Rivers and Bridges Committee, said that retention of the old span for a year would cost $130,000 in maintenance and cut into potential revenues of the new bridge.

MEN AND JOBS

A. E. Niederhoff, senior structural engineer for the Portland, Ore., district of the U. S. Army Engineers, has been assigned to special engineering duty in South America. Mr. Niederhoff heads a party of engineers and geologists going into this foreign service.

Samuel A. Tomlinson, Jr., former assistant district engineer in the Hattiesburg, Miss., office of the Mississippi State Highway Department, is now a captain in the Corps of Engineers serving overseas.

Five members of the staff of the U. S. Geological Survey office at Asheville, N. C., have entered the armed services. They are: **Robert J. Smith,** Pittsburgh, Pa., junior engineer; **G. E. Harbeck, Jr.,** of Zanesville, Wis., assistant engineer; **John R. S. Hill,** Columbia, S. C., junior engineer; **Mack Brown,** Asheville, hydrographic field assistant; **Meredith Farr,** Asheville, hydrographic field assistant.

Capt. F. O. Reeves, executive officer in the Little Rock, Ark., engineer district, has been promoted to the rank of major.

Amos J. Alter, sanitary engineer of the Indiana State Board of Health has been commissioned assistant sanitary engineer in the U. S. Public Health Service Reserve and assigned to headquarters of the medical division of the Office of Civilian Defense at Washington, D. C.

Ralph Bruno, of New Canaan, Conn., stationed at Jacksonville, N. C., for the past year as assistant public health engineer, has been commissioned a first lieutenant in the U. S. Public Health Service.

Marshall S. Dutton, superintendent of water of Oak Park, Ill., has been appointed commissioner of public works and building commissioner in addition to his other duties. Mr. Dutton entered the department of public works in 1924 as assistant commissioner of public works and in 1937 took charge of the water department.

J. D. Goulette, Jr., senior civil engineer at the Federal Works Agency's regional headquarters in Fort Worth, Texas, has been commissioned a first lieutenant in the Marine Air Corps.

E. J. Willis of Morehead City, N. C., who has served as sanitary engineer for the Carteret County department of health for the past two years, has been appointed district state sanitary engineer succeeding **E. L. Dudley,** who entered the armed services recently.

John Adams, civil engineer of Des Moines, Iowa, recently won the 1942 community service award presented by the Des Moines Chamber of Commerce for his work as secretary of the group.

Wilbur S. Smith, director of the traffic division of the North Carolina State Highway and Public Works Commission, has accepted appointment to do traffic research work at Yale University.

Maj. L. L. Flint, who has served as area engineer in army construction at Clinton, Iowa, has been made post engineer.

Harold A. Weinbaum, former engineer with the Tennessee Valley Authority at Knoxville, Tenn., recently was promoted to captain in the U. S. Army.

Robert W. Eddy, of Ann Arbor, Mich., has been appointed associate sanitary engineer of the Farm Security Administration for Arkansas, Louisiana and Mississippi. Mr. Eddy was formerly connected with the Illinois state health department at Lawrenceville, Ill.

The Erie Railroad Co. recently announced five promotions in its engineering department. **F. A. Howard,** engineer of structures, has been made consulting engineer with headquarters at Cleveland, Ohio; **A. M. Knowles** succeeds Mr. Howard as engineer of structures; **H. A. Dise,** chief draftsman, has been promoted to succeed Mr. Knowles; **W. R. Marshall** becomes chief draftsman and **A. A. Visintainer** is made assistant engineer, department of structures.

Don C. McMillan, city engineer of Ventura, Cal., from 1927 to 1934, recently took office as city manager of Alameda, Cal.

Stephen T. Banaszok, Cudahy, Wis., formerly employed as an engineer at the Badger Ordnance Works, has been commissioned a lieutenant in the navy's civil engineer corps.

F. H. Manchester, of Asheville, N. C., has been commissioned an ensign in the U. S. Navy.

Lt. Col. William A. Davis recently assumed duties as U. S. Army District Engineer for the Nashville, Tenn., district, succeeding Col. O. E. Walsh who has been transferred for service elsewhere.

Paul T. Norton, Jr., civil engineer and head of the industrial engineering department at Virginia Polytechnic Institute, has become a consultant to the Office of Production, Research and Development of the War Production Board. He has been granted a year's leave of absence from his duties at the school.

Appointment of **Fred C. Hunter** of Raleigh, N. C., as North Carolina State Utilities Commissioner has been approved by the state legislature.

Col. Benjamin Talley, engineer officer of Mangum, Okla., who has supervised construction of Army installations in Alaska for the past two years, has been awarded the Distinguished Service Medal for his services, according to the Alaska Defense Command.

Robert E. Laidlaw, King's Counsel and civil engineer, has been appointed by the Canadian Minister of Justice to be judge in the appeal division of the supreme court of Ontario. A graduate in civil engineering of the University of Toronto, Mr. Laidlaw first served as a railway engineer and later joined the legal staff of the Canadian National Railways. He has been for some years a special lecturer in the faculty of applied science and engineering at the University of Toronto, lecturing on "Engineering Law."

Maj. L. A. Wilson is area engineer in charge of construction of an army base near Greensboro, N. C.

Maj G. R. Schneider, who was among the first men assigned to the Little Rock, Ark., district engineer office when it opened in 1937, recently was promoted to lieutenant colonel. He is in charge of the engineering division of the district office.

John Schofield of Montreal has been appointed to succeed **C. Blake Jackson** of Toronto as controller of construction in the Canadian Department of Munitions and Supply.

Harold O. Church who has been in charge of construction work for the Army at Cambridge, Ohio, has returned to his post as city engineer of Zanesville.

T. C. Wescott, engineering manager, has been elected vice president of Ebasco Services, Inc., the service organization for the Electric Bond & Share Co. system.

D. Robert Conrad, Wilmington (Ohio) County engineer, has been appointed a member of the law committee of the State County Engineers association.

Lt. Fred Curtis, of Tampa, Fla., has been promoted to the rank of captain at Camp Butner, N. C.

Walter Kidde Dies; Was Engineer Industrialist

Walter Kidde, 65, engineer, manufacturer and civic leader, died recently at his home in Montclair, N. J.

The founder and president of Walter Kidde & Company, manufacturer of life-saving and fire extinguishing apparatus, Mr. Kidde was a civil engineer and also head of Walter Kidde Constructors, Inc., engineers and builders.

A graduate of Stevens Institute of Technology in 1897, Mr. Kidde served an apprenticeship with Burhorn & Granger, consulting engineers, and at the age of 23, opened his own offices as Walter Kidde, Engineer and Constructor. This business has continued under the name of Walter Kidde Constructors, Inc., and among the many projects that it has constructed are the New York approaches to the George Washington Bridge; Castle Village on Riverside Drive in New York City; shipyards at Port Newark, N. J. and Kearny, N. J.; many of the buildings at the Brooklyn Navy Yard and several low-cost housing developments.

Walter Kidde

Almost as widely known for his civic activities, Mr. Kidde was a life trustee of Stevens Institute; had served as chairman of the North Jersey Water Board; a member of the Town Council of Montclair; a member of the New Jersey State Highway Commission and many other business and social organizations.

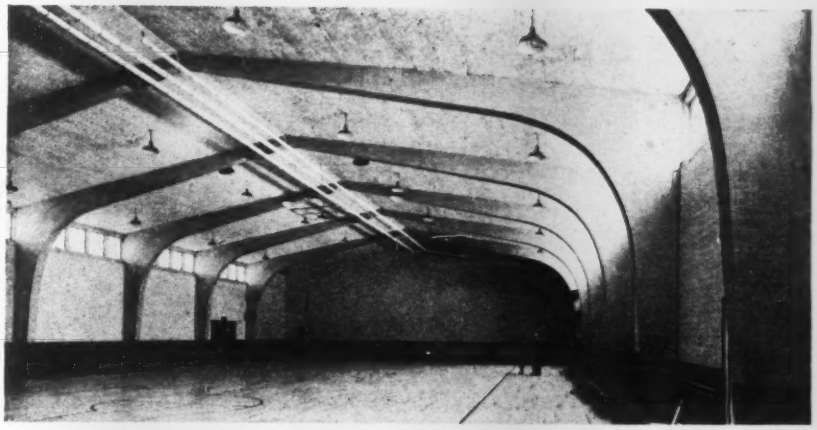
• • •

Florida pares road projects for 1943

The Florida state road department recently tentatively estimated its 1943 budget at $31,600,000—a reduction of $2,200,000 from 1942, due to reduction of gasoline revenues.

The budget, to be adopted after meetings in February and March, will not carry any funds for new road construction exclusively with state money because available building revenues will be used in cooperative programs with the armed services and the public roads administration for strategic highways with military importance.

DURING December of 1942, bids for building construction and totalling $4,000,000 were called at Halifax, N. S. Largest of these contracts was one for $2,500,000 awarded to the E. G. M. Cape Company by the dominion government.



Three-hinged laminated timber arches

Three-hinged arches of 70-ft. span, made of glued laminated wood, support the roof of a new recreational center at a west coast Navy yard.

There are six of the arches, spaced 18 ft. on centers, rising to a height of 28 ft. at the center and giving the building a height of 20 ft. at the eaves. Each arch is of uniform 14-in. width from spring line to crown, thickness varying from 19 in. at the floor to 38 in. at the eaves and decreasing back to 9 in. at the center.

The ribs were built up of 1x6 and 1x8-in. boards glued with self-bonding casein glue and clamped, during gluing, with ¾-in. bolts spaced 16 in. on the curve and 18 in. on the straight sections. The roof is laminated construction consisting of 2x4s on edge.

On the top is tar and gravel surfacing and the under side is a sound-absorbent material.

Architects were F. A. Naramore & Associates, Seattle; E. L. Strandberg was structural engineer and H. F. Miller, Bremerton, Washington, carried out the construction contract.

Report warns of economic effect on road planning

A huge postwar program of highway extension that fails to recognize the economic problems of the depleted metropolitan center in the New York area will be disastrous, Dr. Edwin S. Burdell, director of Cooper Union, said in a review of "From Plan to Reality," third report on planned regional development in the New York metropolitan area recently issued by the Regional Plan Association, Inc.

"It may be hoped that this report marks the end of an epoch which coincides with the leveling off of the population curve and an orientation henceforth toward conservation and improvement in the quality of urban and suburban areas, instead of accepting the old pattern of unlimited expansion as inevitable," Dr. Burdell said.

"The customary uses of leisure time are undergoing a fundamental change. Postwar objectives for a publicworks program should not be based on the assumption that the urban population will necessarily devote its main concern to pneumatic tires and third rails, rushing from an exploited suburban residential area to a blighted urban business area and back again, and spending its leisure driving bumper to bumper over express highways to open country even farther beyond reach.

"Furthermore, dwellers of the central area whose incomes are limited so that they cannot afford automobiles, are becoming increasingly aware of the value of small open spaces in the immediate vicinity of their apartment blocks, and they criticize the proposed huge postwar program of highway extension.

• • •

Salt Lake City plans reservoir construction

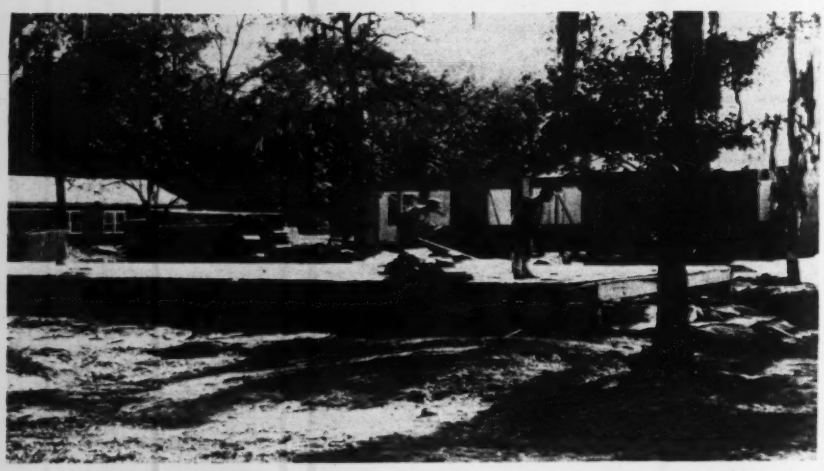
Construction of a $99,000 reservoir to increase the Salt Lake City, Utah, water supply facilities, is planned for the immediate future, Water Commissioner George D. Keyser said recently.

The new reservoir would be financed by a redrafting of water expansion plans already on the 1943 "must" list. The 1943 budget sets up $152,000 for water system extensions to augment the supply for a projected gasoline plant. Changes in plans for the proposed extension, eliminating a 16 in. pipeline two miles long, will save the $99,000 required for construction of the reservoir. Water will be piped to the new plant through an extention of existing lines.

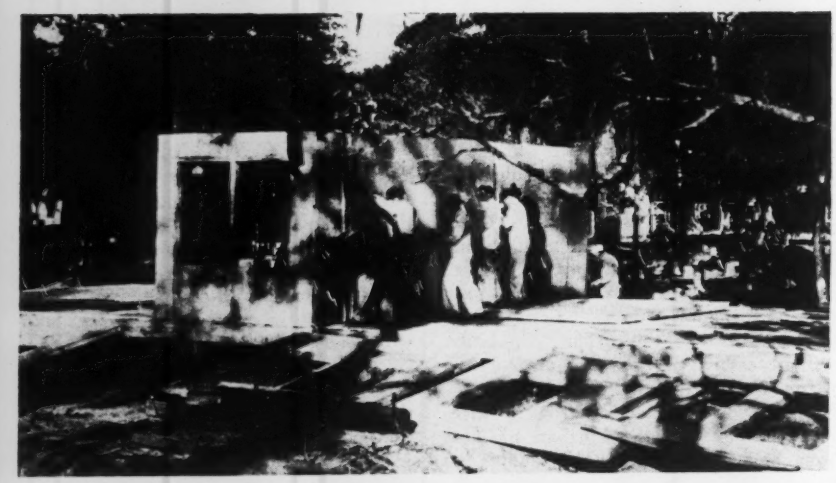
Planned is a 3,000,000 gal. reservoir in the southeast quarter of the city to impound water from city wells in that region.

Six-room home in six hours' time

9 a. m.—There's a whole house contained in the loads on the three trucks.



10 a. m., and complete flooring has been laid for the new structure.



At 10:30 a. m., center section is manhandled into its position.

Providing a six-room home for [illegible] families in less than a full working [illegible] is illustrated in the accompanying series of pictures on demountable house erection operations for war workers at Liberty Hills, near Charleston, S. C.

Ten men, including six carpenters and four laborers, put together the house shown in the six hours and 20 minutes between 9 a.m. and 3:20 p.m.

The materials for the entire house just filled three trucks (shown in the first picture). The wall sections, ceiling sections, roof parcels, partitions and other major units were pre-assembled in the contractor's mill and as loaded on the trucks, were ready to be put together according to a simple numbering system.

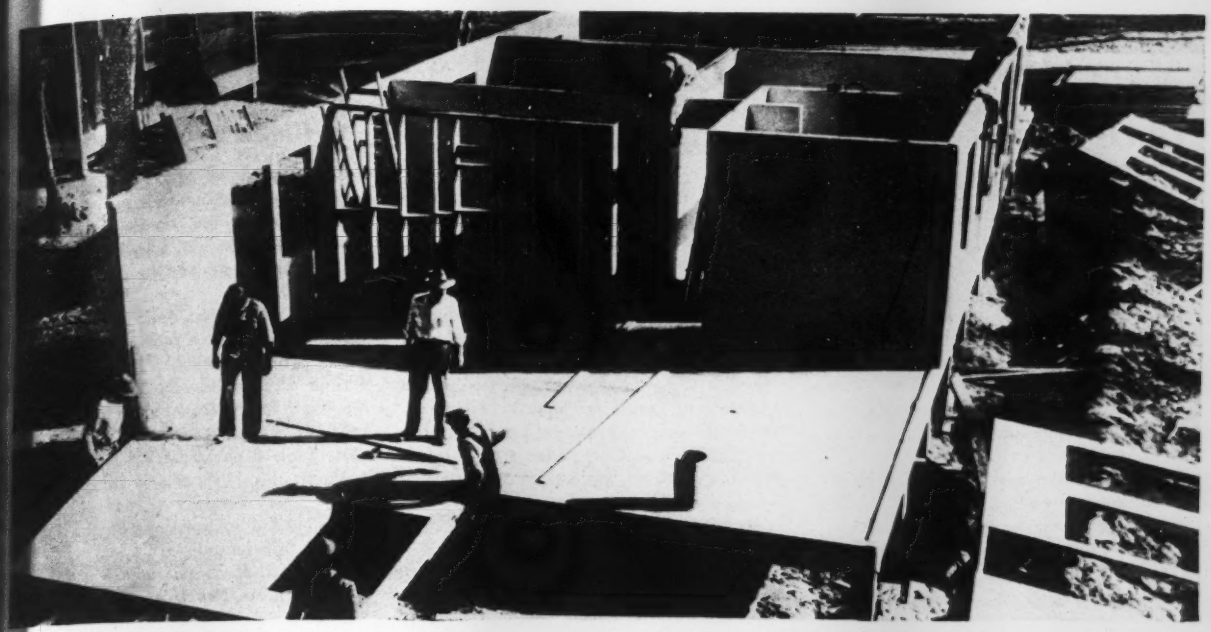
First step in construction was placing of flooring over foundations that were laid out and prepared ahead of time by other work crews, who also put down sewer and water lines.

The first section to be put up was the center partition dividing the house into separate dwelling units for two families. One of the key construction principles of demountable housing used in these structures is the use of slotted metal straps, with holes in each end to receive double-headed nails. Rows of these straps tie the walls to the foundation, brace the corners and perform other strengthening functions. The double-headed nails—the only kind used in these homes—provide a major part of the demountable element. The first head is driven flush with the strap or the wood, while an offset section of the nail allows another head to remain projecting. This projecting head permits the nails to be drawn easily and rapidly without damage to the structure, should need for demounting or removal arise.

Shortcuts Used

The large photograph at the top of the second page of this article shows other "tricks" also used in this type of construction.

Extending toward the lower foreground, along the floor, are two narrow wooden strips. The strip on the left has already been nailed in place, to mark the position where a partition will be erected. Each wall section, partition and other unit of these demountable houses has a groove in its edge that fits over strips such as these. Entire prefabricated walls can be slid into place by this tongue-and-groove principle, and when set, the sections are tied down by the metal straps and double-headed nails.



A close-up view of the work in progress, with carpenters, electricians, plumbers and laborers working as a team.

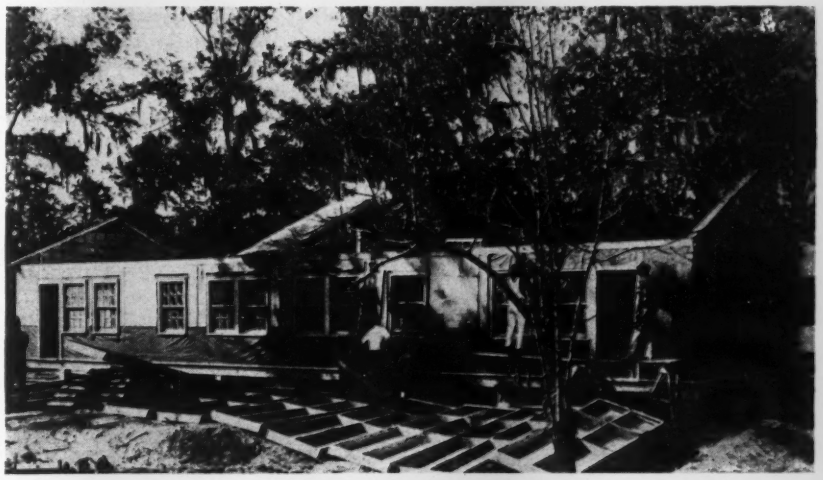
Another feature is the use of Upson board on the partitions and inner sides of wall sections. Outside coverings of the sections are of three-ply plywood.

The section of framing at the center left in the large picture is a special section, left without covering at the mill in order to make easy the installation of pipes and electrical conduit. These pipes and lines are installed while erection proceeds, and as soon as the installation of utilities is finished, the wallboard covering, precut to fit, is nailed over the bare framing.

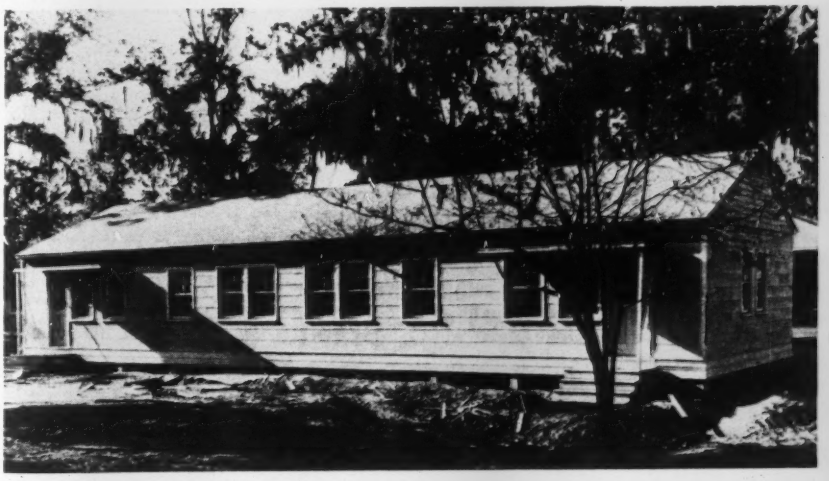
Insulation Installed

The fifth picture, taken at noon of the same day, shows the house well on its way to completion. All of the wall panels have been erected as well as the inside partitions; windows have been set and gables erected. The ceiling sections, not shown in the photograph, have been set in place above the rooms and at center the first roof panel has been placed. Other roofing panels are visible in the foreground. A protective layer of asphalt felt is placed over the boarding, before shingling.

By 3:20 p.m. the building was complete, with asbestos shingling on the walls and asphalt shingles on the roof. Doors were hung, porches and steps added and other details completed. Landscaping, however, remained to be done, and plumbing and electric fixtures were still to be attached to connections that were already in place. Contractors on this project—a part of a 2,400 unit project at Liberty Hill—are Skinner and Ruddock of Charleston.



12 noon, roofing, panels and sheating going into place.



3:20 p. m., and the building is ready for occupancy.

Memphis wins rail salvage fight, then drops injunction against WPB

After winning a court injunction to prevent the War Production Board from removing rails buried in its streets last week, officials of the city of Memphis, Tenn., agreed to dissolve the injunction after WPB had agreed to withdraw its requisition order.

The case came up in U. S. District Court at Memphis last week (*ENR*, Feb. 11, p. 170) when the War Production Board's scrap collection agency—War Materials Inc., reportedly ordered condemnation proceedings to obtain some 1,500 tons of scrap rails embedded in 78 railroad crossings within the city limits. Condemning the action of WPB as "capricious, arbitrary and unreasonable," the city obtained a temporary injunction restraining WMI from carrying out its announced intention of reclaiming the steel for salvage. John L. Exby, city attorney, questioned the authority of a federal agency to condemn public property already in public use. City officials, including Mayor Walter Chandler, said that 1,500,000 lb. of scrap metal collected in recent campaigns was still awaiting shipment from the city, and that there is no immediate need for the embedded rails. Commissioner O. P. Williams of the Department of Public Works, testified that the rails, sunk in concrete, made crossings smoother and prevented cracks and holes from appearing. He added that city traffic would be paralyzed if all the rails were removed at once.

Granting a permanent injunction, U. S. District Judge Marian Boyd held that the removal of the rails at this time would cause "irreparable damage" to the city from the standpoint of public safety. "The court finds," Judge Boyd said, "that there is available at this time in private hands and in the city of Memphis at least 2,334 tons of materials of like kind. This is more accessible than that sought, and can be collected at less expense."

Mayor Chandler announced that the injunction had been dissolved upon consent of the city and at the urgent request of high WPB officials, only after WPB notified the mayor's office that it had withdrawn requisition papers for removal of the rails.

"In this instance, all that we ever intended was to prevent the doing of an unwise, extravagant and useless act by uninformed agencies," Mayor Chandler said. "The decision of Judge Boyd was recognized by everyone as being just and correct."

It was understood that the WPB asked the injunction be dissolved to prevent establishment of a possibly damaging court precedent.

Lawrence M. Lombard, assistant general counsel for WPB, wrote city officials subsequently that requisition papers for Memphis grade crossing rails were signed last October when there "was a most urgent need" for such scrap metal. "Since the original request for this requisition was made," he added, "as a result of salvage efforts undertaken throughout the United States, this situation as to this particular type of scrap material has substantially improved."

"At the present time WPB is not recommending the payment by the government of any prices above the OPA ceilings for this type of scrap in the region in which Memphis is located. Accordingly, WPB has requested the Metals Reserve Co. to drop the requisition in this case and recall the requisition orders from the United States marshal."

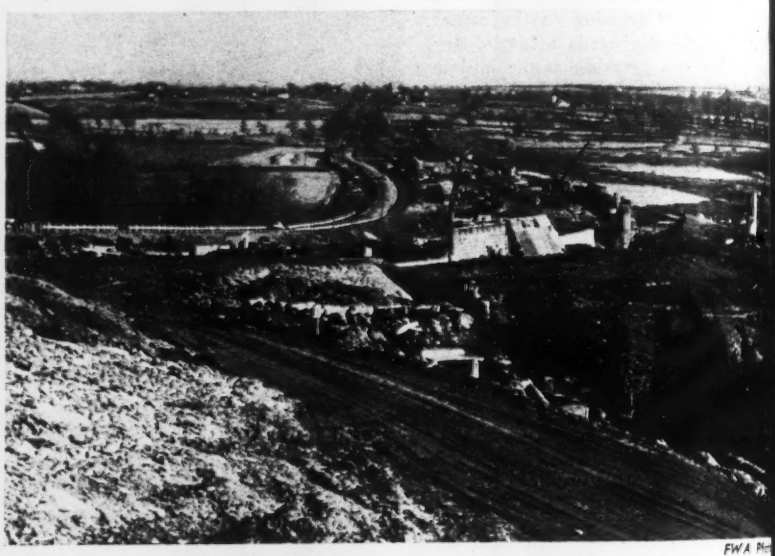
Refuse disposal practice outlined by Health Service

Refuse disposal practice that will conserve manpower as well as critical materials and yet not violate health standards are outlined in a bulletin prepared for distribution by the U. S. Public Health Service.

Recognizing that extensive population shifts have greatly increased refuse disposal problems in many communities at a time when expansion of collection and disposal facilities is most difficult, the bulletin makes recommendations to alleviate such situations.

Particular emphasis is laid on use of the sanitary landfill method of disposal, and detailed instructions on the application of this method are given.

Copies of *Recommended Wartime Refuse Disposal Practice*, which was prepared by assistant sanitary engineer C. C. Spencer under the direction of J. K. Hoskins, sanitary engineer director and chief of the sanitation section, may be obtained by addressing Mr. Hoskins at the U. S. Public Health Service, Washington, D. C.



FWA Photo

Rush Rhode Island water supply work

Working in two 12-hour shifts, seven days a week, laborers are rushing to complete a 400 m.g. impounding reservoir in the Lawton Valley near Portsmouth, R. I., to supplement the water supply of the Newport area.

The new reservoir will inundate 100 acres of farmland.

An earth dam, with concrete core, paralleling the highway shown in the photograph above, will have a top elevation 50 ft. above ground level, and will be about a half mile in length. The concrete core will be 8 ft. wide at base and 2 ft. wide at top.

A 4 m.g.d. filtration plant and a 4 m.g. storage reservoir, with a chlorinator building, will be built adjacent to the reservoir. Other material to be used in the project will be 5,200 lineal feet of 20-in. cement asbestos pipe from other reservoirs to the new site and 6,300 lineal feet of 24-in. cement asbestos pipe from the pumping station to an existing line carrying water to the city.

This war public works project is one of three for which Federal Works agency grants of Lanham Act funds amounting to about $2,500,000 have been allocated.

BRIEF NEWS

THE MEXICAN Confederation of Chambers of Commerce at a recent general annual meeting in Mexico City pledged all out aid and cooperation with the federal government for the construction of hospitals and sanatoria in key communities of Mexico as a wartime measure.

A BILL has recently been introduced in the North Carolina legislature that would require the state highway and public works commission to drag private roads leading from state highways and to clean ditches along these roads for a distance not to exceed 1½ miles.

IN RECENT colorful ceremonies at Ross Auditorium, Great Lakes, Ill., Rear Admiral Downes, Commandant of the Ninth Naval District, presented the Army-Navy "E" flag to the Henry Ericsson Company of Chicago for its part in building Great Lakes Naval Training Stations, one of the largest housing projects in the nation.

THE North Carolina Highway and Public Works Commission is reported considering reopening closed prison camps in the western section of the state in order to provide labor for road maintenance work. Local labor that formerly was available for maintenance work has been drawn into the armed forces or war industries.

THE FLORIDA state road department said last week it had been allotted $362,000 in PRA funds for construction of a 4-ft. all-concrete highway about 2½ miles long from Orlando City limits to Lake Barton. The road will give better access to army installations.

THE maintenance, safety and traffic departments of the Iowa highway commission has just completed a series of safety meetings with highway maintenance employees in each of the state's 99 counties. The meetings are designed to lessen the number of accidents among employees.

THE GEOLOGICAL Institute of Mexico, a part of the National University, recently celebrated its fiftieth anniversary with a fiesta in Mexico City.

FIRST construction preference this year will be given the southern section of the Mexican part of the Pan American Highway; the road from Mexico City to Suchiate, on the Guatemalan border; the central highway that will link the national capital with Ciudad Juarez and serve the mining states of Queretaro and Chihuahua, President Manual Avila Camacho, of Mexico announced recently.

Urge bridge construction to clear Norfork waters

The Arkansas state highway commission has asked the Corps of Engineers to sink piers for a new bridge at Henderson, over the Norfork River, before the new Norfork Dam downstream is closed.

Highway Director W. W. Mitchell said the water from the dam will extend 50 ft. above the present highway at Henderson. He added that a proposal to reroute U.S. highway 62 to run over the top of the dam would practically isolate the west half of Fulton county and the east half of Baxter county.

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Utah counties to approve road building policies

Officials of Utah counties are to be consulted about work done within their jurisdiction by the state highway department, under a new order issued by Governor Herbert B. Maw.

The governor, in a directive to the state road commission, said that no roads should be improved or built without first calling for advice and counsel of the counties affected. He asked that all road projects now under consideration be forwarded to him to be relayed to the county officials concerned for their comments before any further action is taken.

California records huge 24-hour rainfall

What is believed to be an all-time record for rainfall in a 24-hour period in the United States was set in the mountain ranges east of Pasadena, Cal., Jan. 22-23, when rain gages showed 25.83 inches for the period.

M. E. Salisbury, chief engineer of a local flood control district, reported the figures, and said that consultation with Weather Bureau records showed that the closest approach to this figure was 24 in. in 24 hours at Hearne, Texas, June 28, 1899.

The late January rainfall in southern California was among the heaviest on record. Thirty inches in four days was not uncommon in most mountain areas.

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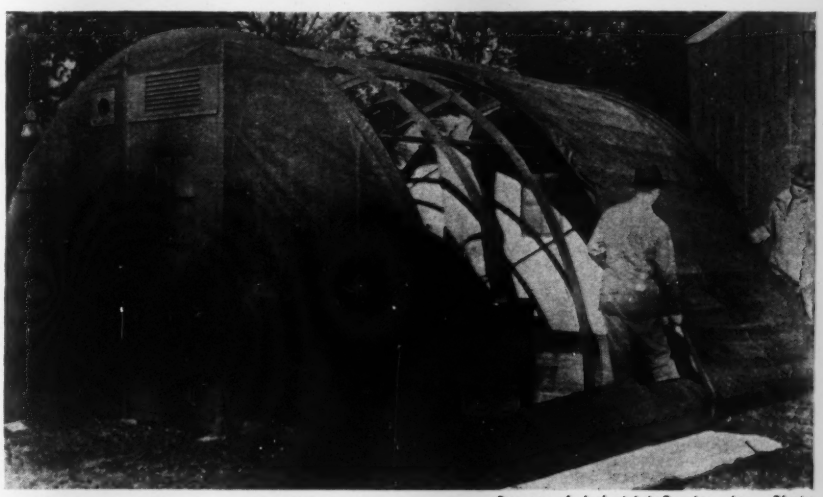
Washington considers $125 million postwar budget

The Washington state legislature is considering a proposal by the state highway advisory commission for a postwar highway construction program to cost more than $125,000,000.

The Commission's report listed 75 projects for future construction, with the recommendation that the highway department complete all engineering and legal preparations during the war period.



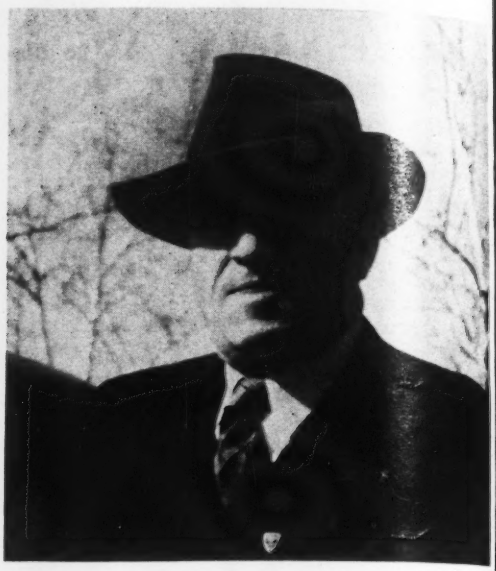
Bureau of Industrial Service, Inc., Photo

New Type Portable Shelter for Army

In line with efforts to conserve critical materials and reduce demands upon shipping space, a contract has recently been awarded for the new type portable shelters shown in the photograph above. Blankets of glass fiber insulation in the walls and flooring are said to save more than 20,000 lb. in the weight of fuel and must be transported to maintain comfortable temperatures within shelter. When packed for shipment, they are sufficiently light and compact to permit transportation of the complete unit by air.

Of impregnated cotton fabric and laminated wood frame construction, the shelters are 16 ft. in width by 8½ ft. high in the center. They may be used in any 8-ft. multiple of length. No metal, other than incidental hardware, is used.

Above: WARREN H. BOOKER, director of the division of sanitation, North Carolina State Board of Health, carries a winner's smile—he's just won first prize in the A.W.W.A.'s membership promotion activity competition.



Above: CARL MENGEL, project manager for Olsen & Deitrick, architect-engineers of Raleigh, N. C., has just completed construction of an Army airbase. Mr. Mengel is a former public works director of Greensboro, N. C.

MEN AT WORK

Above: F. D. FOSS, formerly connected with the New York City Housing Authority, is now project manager supervising construction of huge concrete buildings on a war job in Maryland.

Below: Shipbuilder JIM LONG is hull superintendent on Liberty freighters being built at a yard in Florida. He served an apprenticeship at Cramp's, was superintendent of Yard 4 at Hog Island in 1918-20, and has built ships, caissons and tunnel shields in yards all over the United States.

Above: FRED NARR of Corbetta Construction Co. says this isn't where he usually works. He's more likely to be found in the field in his capacity as general superintendent on a big southern war job.

ove: Now that America's "Glory Road"—the Alcan Highway—has been cut through for ck use, the work of improving the road occupies the attention of engineers. At the Liard ver crossing are (l to r) CAPT. GEO. P. WALTHAL; MAJ. M. E. ERDOFY, LT. COL. R. F. CHILSKY, and COL. F. R. LYONS, commander of the 340th Engineers.

Above: G. R. RICH, chief design engineer for the TVA says he's been kept busy during the past year keeping designs abreast of construction as shortages change the picture.

low: R. L. WHANNEL, of Springfield, Ill., ssistant state highway engineer, has become hairman of the board of directors of the ate Association of Highway Engineers.

Left: ROBERT McCARTHY (right) building contractor now completing a 1,740-apartment housing project for Kaiser shipyards at Richmond, Cal., uses methods much like those of the famous shipbuilder. He built temporary houses for Navy Yard workers at the rate of 40 per day. With him here is EDWARD MANNING, superintendent on a 332-family unit in the Sacramento area.

Above: Building soil-cement runways for a base in Florida are (l to r) PAUL W. THOMAS, superintendent for the W. L. Cobb Const. Co.; H. M. PARRISH and J. J. KENNEDY, of the Corps of Engineers, and P. C. CONE, Portland Cement Assn.

Below: The task of keeping supplies moving to work crews improving, widening and otherwise re-working the Alcan Highway has fallen largely on the shoulders of the four men here. Left to right, they are: J. L. AUGER, superintendent of loading for the E. W. Elliott Co.; CARL C. WILSON, PRA; and L. W. HILL and G. E. ATKINSON, of the Elliott Co.

Town buys bridge to replace overpass span

Faced with a nightly traffic tangle due to the condemnation and closing of an overpass over railway tracks through the center of the business district, the town of Canton, N. C., solved its problem by simple means.

State Highway Commission inspectors closed an overpass in the center of the town a year ago, as unsafe for traffic. Only one other crossing over the tracks exists—at a far end of the community—and this caused considerable nightly traffic tangles as workers went toward their homes.

Unable to obtain priorities for reconstruction and repair of the old bridge, town officials did the next best thing by buying an abandoned railroad bridge in Tennessee, dismantling it and taking it back to Canton. Work of re-erecting the bridge already has started, and the project is expected to be completely by early fall. When completed, officials say the new bridge will be one of the most substantial in the area with a gross load capacity of about 15 tons. The entire project will entail a total cost of between $25,000 and $30,000.

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Seek extension of road body's emergency powers

A bill to extend for a period of two years the emergency powers on awarding road construction contracts granted to the North Carolina State Highway and Public Works Commission has been introduced in the North Carolina legislature.

The emergency powers, originally granted by the 1940 legislature, permit the commission to waive the statute requirement for advertising and competitive bidding on urgent construction of highway projects that are requested by any authorized agency of the federal government as being necessary for national defense.

For such urgently needed highway projects, the commission may negotiate contracts, provided the projects are within 30 miles of some national defense project and that no contracts are negotiated without the approval of the governor. Contracts also may not be awarded until three days after the commission has published a notice of its intention to award the contract.

GRAND Valley Dam will be the official and permanent name of the $2,000,000 structure heretofore known as the Shand Dam across the Grand River near Fergus, Ontario, according to the Canadian Government.

Sir Henry Maybury Dies; British Road Authority

Sir Henry Maybury, prominent British authority on roads and city transport, died at Shrewsbury, England, on Jan. 7, according to the latest issue of *The Engineer* to be received in this country. Sir Henry was known to many engineers in this country as the result of extensive travels made here in 1925 to study our highway and city-transport systems.

Born in Shrewsbury in 1864, Sir Henry began his study of methods of improving road surfaces in 1903 when he was appointed engineer and surveyor for the county of Kent. In that year the legal speed of motor cars in England had been raised to 20 miles per hour. In 1913 he was made chief engineering officer of the Road Board of Great Britain, and three years later was sent to France to organize the road service for the British Army, later becoming director of roads under the director-general of transportation. In 1919 he retired from the army with the rank of brigadier-general and was appointed director-general of the Roads Department of the Ministry of Transport, which position he held until 1928. It was during this period that he planned the construction of many new arterial highways. From 1928 to 1932 he served in an advisory capacity to the Ministry of Transport, and from 1924 to 1933 he was chairman of the London and Home County Traffic Advisory Committee.

Henry Maybury

Sir Henry served the Institution of Civil Engineers as president in 1933-34, and the Institute of Transport as president in 1921-22.

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WPB revises procedure for blanket building approval

A revision of procedure to be followed by operators of office or loft buildings, apartment houses, hotels, industrial plants and other substantial buildings in filing a single application for blanket authorization to cover small miscellaneous construction work, became effective recently, the War Production Board announced.

This authorization makes it possible for both the operators and WPB to avoid handling numerous applications for construction jobs that are necessary in larger buildings. Before the original procedure was instituted last September (*ENR*, Sept. 24, 1942, p. 402), operators had to receive individual authorization when the cost for all such work reached the limit set up in the stop-construction order L-41.

Under the new plan, all miscellaneous construction jobs—except those estimated to cost $10,000 or more—may be included in a single application for blanket authorization. The previous limit was $5,000. A separate PD-200 application must be submitted for each structure or project estimated to cost $10,000 or more for which authority to begin construction is required. The revised procedure also provides for the filing of all applications covering miscellaneous construction jobs not requiring priority assistance, with the War Production Board, Construction Division, Empire State Building, New York City, N. Y. Applications covering miscellaneous industrial construction jobs requiring priority assistance must be filed with the War Production Board, Washington, D. C.

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Oregon to share cost of building service roads

The Oregon state highway commission set a precedent recently when it agreed to share in the cost of constructing a service roadway alongside the Pacific highway at Waverley Lakes—a residential district near Albany—Ore., to provide safer entrances and exits to the highway for home owners.

Chairman Henry F. Cabell predicted that similar measures will have to be taken along state highways in other parts of the state.

In another action the board decided to enter agreements with cities for maintenance of highways through city limits by city crews, the municipalities being reimbursed for the work. The move is designed to ease manpower burden.

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Baltimore plans major postwar building program

Tentative plans for a long-range city improvement program after the war involving expenditures of $67,500,000 have been submitted to Mayor Jackson of Baltimore by his committee on postwar adjustments.

Adoption of the program is held up pending approval by the state legislature of authority to float additional loans totaling $15,000,000.

As submitted, the program contemplates expenditure of $15,000,000 on highways, $8,000,000 on sewers, $32,000,000 on water supply and equipment, $10,000,000 on schools and $1,500,000 for conduits, piping and other matters.

WASHINGTON HIGHLIGHTS

REFUSAL of funds to the National Resources Planning Board—if Congress carries out the recommendation of the House appropriations committee—would result in elimination of the continuing six-year program of federal public works maintained by NRPB. This is now the only major public works activity carried on by the board. It has made some effort to stimulate local advance planning of public works, but this activity has been fairly well halted already by lack of funds.

TRANSFER of the Facilities Bureau of WPB from Program Vice-chairman Eberstadt to Production Vice-chairman Wilson is not expected to modify the program of cutting down on the construction program to any great extent. Wilson is, if anything, more convinced than Eberstadt that few new facilities are needed. Current WPB intention is to cut a scheduled $11,500,000,000 of war construction in 1943 to $9,500,000,000 or less.

A SINGLE form of application, PD-105, for priority assistance on publicly or privately financed housing has been established in accordance with the recent agreement (*ENR* Dec. 24, 1942, p. 883) under which WPB is to make quarterly allotments of material to the National Housing Agency, which will then distribute the material to individual projects. All housing built under the new rules must be rented, for at least four months, and may only be occupied by war workers.

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Pennsylvania to set up postwar planning group

Governor Edward Martin of Pennsylvania has asked the state's legislature to establish a postwar planning commission to outline heavy construction projects, among other things, that can be started immediately after the war's end.

"This commission will consider a long-range road program, flood control, reforestation, construction of dams on tributaries, and the construction of new public works and buildings that will be needed," the Governor told legislators.

AS SOON as priorities are granted, a waterworks and sewage system will be constructed at Jacksonville, Ark. Funds have been allocated by the city and the federal government, to increase the city's water supply plant capacity to accommodate an influx of defense workers.

JOBS OF THE WEEK

HOUSING, Utah
Public Housing Authority, NHA, Kansas City, Mo., awarded contract, housing, to J. I. Barnes Construction Co., Salt Lake City, at $2,470,000; other projects to Robert E. McKee, Los Angeles, Calif. and Ogden, Utah, $4,241,500. Burns & McDonnell, Kansas City, Mo., are engineers.

HOUSING, Indiana
Sherry-Richards Co., Chicago, Ill., has been awarded contract to construct prefabricated housing by Public Housing Authority, NHA, Chicago, Ill., for bid of $2,916,000. Allied Architects & Engineers, Indianapolis, and A. M. Strauss, Fort Wayne, Ind., are architects.

HOUSING, Washington
B. H. Sheldon, Spokane, Wash., was lowest bidder on housing project at $999,900; Clifton Applegate and Henry Georg, Spokane, were low on constructing second housing project at $819,112. Public Housing Authority, Seattle, Wash., opened bids February 5. Whitehouse & Price, Spokane, are architects.

HOUSING, Maryland
John A. Johnson Construction Corp., Washington, D. C., will construct Calvert Housing Project for Alley Dwelling Authority, Washington, D. C. NHA Skidmore, Owings & Merrill, New York, N. Y., are architects. Cost $1,431,000.

HOUSING, Virginia
Public Housing Authority, Washington, D. C., awarded contract for 1,075 temporary family units to Allen J. Saville, Inc., Richmond, Va., $2,080,750. Merrill Lee and Marcellus Wright, Portsmouth, archts.

HOUSING, Chicago, Ill.
Princeton Park Trust will build group housing project Wentworth Ave., between 91st and 95th Sts., to cost $4,500,000. Masonry on first section awarded to E. A. Borg & Co., Chicago; millwork to Illinois Interior Finish Co.; plumbing to Pronger Bros., Blue Island; electrical work to Malko Electric Co., Chicago. Cost of first unit, $1,225,000. Holsman & Holsman, Chicago, Ill., are architects.

MOTOR REPAIR SHOP, Michigan
U. S. Engineers, Detroit, awarded contract motor repair shop and guard house, incl. utilities, Alpena County, to Strom Construction Co., P. O. Box 86, Grand Rapids. Estimated cost, $1,000,000.

PLANT, California
Standard Oil Co. of California, Los Angeles, Calif., awarded contract for the construction of a plant to Bechtel-McCone-Parsons, Los Angeles, Calif. Estimated cost, $6,200,000.

BUILDING, Kansas
U. S. Engineer, Kansas City, Mo., awarded contract for building, Could County, to Olson Construction Co., Assenmacher Construction Co., and Rokahr Construction Co., Lincoln, Neb. Estimated cost, $3,000,000. Howard-Needles-Tammen & Bergendoff, Kansas City, Mo., are engineers.

BUILDINGS, Pleasanton, Calif.
McNeill Construction Co., Los Angeles, Calif., has been awarded contract by the Bureau of Yards & Docks, Navy Dpt., Wash., D. C., for battalion replacement center at $10,275,000.

FACILITIES, Burns City, Ind.
Maxon Construction Co., Inc., Dayton, O., has been awarded contract by Bureau of Yards & Docks, Navy Dpt., Washington, D. C., additional facilities, Naval Ammunition Depot, at $4,129,700.

ADDITIONAL FACILITIES, Magruder, Va.
Bureau of Yards & Docks, Navy Dpt., Wash., D. C., awarded contract for additional facilities, to Byrne Organization, Dallas, Tex., at $8,038,000.

ADDTIONAL FACILITIES, San Diego, Calif.
Bureau of Yards & Docks, Navy Dept., Washington, D. C., awarded contract additional facilities at the destroyer base, supplementary contract 1 to Macco Construction Co., Clearwater, Calif., $7,570,500.

CONSTRUCTION, New York
U. S. Engineers, Providence, R. I., awarded contract for construction work to A. I. Savin Construction Co., East Hartford, Conn., to exceed $5,000,000.

DRY DOCKS, Stockton, Calif.
Yards & Docks, Navy Dpt., Wash., D. C., awarded contract six sections steel sectional floating dry dock, to Pollock-Stockton Ship Building Corp., Sacramento, Calif., $6,420,000.

Note—Additional bidding and contract news on many projects large and small appear in the Construction News section beginning on page 15.

OBITUARY

Joseph F. Stockwell, 62, civil engineer and executive vice president and director of Keystone Telephone Co. of Philadelphia, died recently at Bryn Mawr, Pa. Born in Portland, Maine, Mr. Stockwell joined the Engineering Department of the company in 1900, and became executive vice-president in 1924.

Noah Pearcy, Sr., 74, construction engineer of Jeffersonville, Ky., died Feb. 8 at Louisville.

U. P. Boucher, 76, civil engineer of Quebec, Canada, died there recently. Born at St. Barthelemy, Canada, Mr. Boucher graduated from the Ecole Polytechnique of Montreal as a civil engineer.

Peter L. Szlapka, 91, of Phoenixville, Pa., who served as structural engineer in the construction of the Broad St., 8th St., Ridge Ave. and Locust St. subways in Philadelphia, died recently at Norristown, Pa. A native of Poland, Mr. Szlapka aided in construction of many of the United States leading railroad bridges.

Israel Aubey, 68, superintendent of the Sudbury Div., Metropolitan District Water and sewage Board, since 1922, died at Framingham, Mass., Feb. 9.

Johannes Bergithon, supervising engineer for the Royal Canadian Air Force, died at Port Hardy, B. C., Feb. 5.

James W. Costello, 57, chief engineer of the city of Newark, N. J., since 1923, and a commission of the Port of New York authority, died Feb. 14. A civil engineering graduate of the University of Pennsylvania, he spent six years in the Engineering Department of the City of Philadalphia, before beginning his long service for Newark in 1918. One of the designers and supervising engineers of the Newark Air Port, Mr. Costello also helped plan the Wanaque Watershed Development, the construction of the Pennsylvania Railroad Station, and the Pulaski Skyway.

Carl F. Lambert, former member of the engineering firm of Burns and McDonnell, of Kansas City, Mo., died Feb. 7 at Coral Gables, Fla.

George Washington Strange, 40, an engineer with the South Carolina State Highway Department, died Feb. 4 at Winnsboro.

J. E. McMurtrey, 65, former county surveyor at Rison, Ark., died at a Hot Springs Hospital, Feb. 6.

Lee Riley, Sr., 80, Waterworks Engineer of Kansas City, Mo., died February 14. At his death, he was a consulting engineer with the Metropolitan Water Company of Kansas City, Kansas.

Kenneth F. Crane, Orange, N. J. city engineer for the past 19 years, died Feb. 3. A graduate of Lehigh University, Mr. Crane joined the Orange Public Works in 1914, and has served their continuously except during the years of the first World War, when he served overseas with the U. S. Navy.

Varnum R. Pankhurst, 75, civil engineer, Topeka, Kansas, died there Feb. 13. He was associated as a consultant with a Kansas Highway Department at the time of his death.

Will Moore, 70, retired contractor of Cynthiana, Ky., died there recently.

James F. Halpin, 80, former Kansas City contractor and real estate operator, died recently at Terrell Wells, Texas.

Joseph Pattinson, 89, retired contractor of Oakland, Calif., died there February 8.

Author and main promoter of the Massillon, O. conservancy districts, **Charles N. Hostetter,** 56, Massillon contractor, died recently.

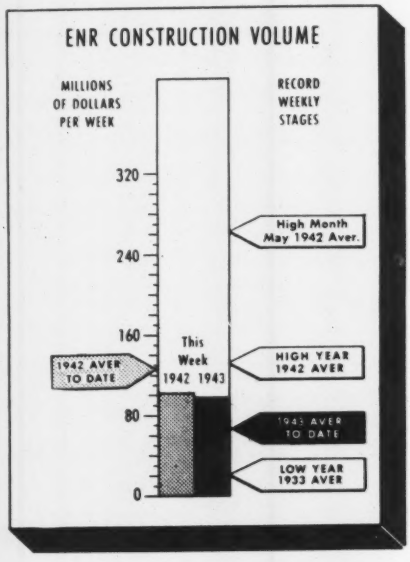
Richard Smith, 48, an Arvin, Calif. building contractor, died February 5.

Robert Porteus, 82, Hartford, Conn., contractor and a partner in the firm of Porteus and Walker, died at Hartford recently.

CONTRACTS AND CAPITAL

CIVIL ENGINEERING construction volume for the week, $98,861,000, is 39 percent above the total for the preceding week, and compares with $102,218,000 reported for the holiday-shortened week in 1942. Private construction is 3 percent lower than a week ago, but public work is 43 percent higher as a result of the gains in both state and municipal construction and federal work. Federal volume, which makes up 93 percent of the week's total, is 43 percent above last week, and state and municipal is 37 percent higher.

The current week's new construction brings 1943 volume to $478,422,000, an average of $68,346,000 for each of the seven weeks of the year. On the weekly average basis, the total is 45 percent lower than a year ago, private work is 61 percent lower, and public construction is down 43 percent.



In the classified construction groups, gains over last week are in bridges, commercial buildings, public buildings, streets and roads, and unclassified construction. Gains over the short week last year are in public buildings, and unclassified construction.

New capital for construction purposes for the week totals $9,220,000, and is made up entirely of state and municipal bond sales. The week's new financing brings 1943 volume to $14,667,000, a figure that compares with $1,369,231,000 reported for the eight-week period in 1942.

CONTRACTS

(Thousands of dollars)

	Week Ending Feb. 19 1942	Feb. 11 1943	Feb. 19 1943
Federal	$62,995	$64,182	$91,80
State & Municipal	12,533	1,225	1,67
Total public	$75,528	$65,407	$93,47
Total private	26,690	5,532	5,38
TOTALS	$102,218	$70,939	$98,86
Cumulative 1943 (7 weeks)			$478,42
1942 (8 weeks)			$896,98

Note: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial building, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	1942 8 weeks	Cumulative 1943 7 weeks
NON-FEDERAL	$127,276	$14,66
Corp. Securities	28,832	
State & Mun.	84,615	13,16
R.F.C. loans	13,829	1,50
FEDERAL	$1,241,955	
TOTAL CAPITAL	$1,369,231	$14,66

ENR INDEX NUMBERS

Index Base = 100

		1913	1926
Construction Cost	Feb. '43	283.48	136.2
Building Cost	Feb. '43	226.90	122.6
Volume	Jan. '43	172	76

FHA MORTGAGES

	Week Ending Feb. 14 1942	Feb. 6 1943	Feb. 13 1943
Selected for appraisal			
Title II	$15,954	$3,879	$4,230
Title VI	$20,162	$8,564	$17,210

* Subject to revision.